



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,134	03/29/2004	Rebecca Wright	3086.EEM	3212
7590	11/14/2007		EXAMINER	
Charles W. Almer National Starch and Chemical 10 Finderne Avenue Bridgewater, NJ 08807			BERMAN, SUSAN W	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	
			11/14/2007	DELIVERY MODE
				PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/812,134	WRIGHT ET AL.
	Examiner /Susan W. Berman/	Art Unit 1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 September 2007.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-13 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-13,17-23 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

***Response to Amendment & Arguments***

The rejection of claims 1-23 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn. Claim 1 has been amended by deleting “non reactive” from “non reactive silicone resin emulsions”.

Applicant’s arguments, see Remarks, filed 09-06-2007, with respect to the rejection(s) of claim(s) of record over WO ‘728 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Yeh (6,347,408).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite elongation and Konig Hardness properties of the “polyurethane dispersion”. It is believed that these are properties of the coatings obtained by UV curing the coating compositions and not of the polyurethane dispersion. If so, it should be so stated in the claims.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-12 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeh (6,347,408) in view of Weikard et al (6,960,639).

Yeh discloses coating compositions for gloves comprising a crosslinked polyurethane impregnated with silicone. A radiation crosslinkable polyurethane dispersion (column 2, line 64, to column 3, line 50). A siloxane based silicone emulsion, such as poly(dimethylsiloxane) emulsion is taught in column 3, line 51-54, and exemplified by "SM 2140" from General Electric in column 4, lines 54-61. The polydimethylsiloxane appears to meet the high molecular weight and viscosity requirements now set forth in claim 1. See Table 1 for components of the disclosed compositions and Example 1, column 8, line 61, to column 9, line 5. Although Yeh teach that the polyurethane is radiation crosslinkable, photoinitiators are not mentioned and thermal curing is employed in the examples.

Weikard et al disclose aqueous coating compositions based on polyurethane dispersions and a photoinitiator. Table 2 discloses compositions comprising a wax and a BYK leveling additive. Weikard et al teach that the preferred photoinitiators are those easy to incorporate into aqueous coating compositions. The disclosed preferred photoinitiators are alpha-hydroxyalkylphenones, such as Irgacure 500 and Esacure KIP photoinitiators (column 14, lines 54-59). Light stabilizers, UV absorbers, wetting agents and dispersions are taught in column 15, lines 27-40. Wax dispersing agent is used in the examples (see Table 2).

It would have been obvious to one skilled in the art at the time of the invention to employ radiation for crosslinking the radiation crosslinkable polyurethane dispersions taught by Yeh because Yeh teaches that the polyurethane dispersion are radiation crosslinkable. It would have been obvious to one skilled in the art at the time of the invention to employ the preferred

photoinitiators taught by Weikard et al in the compositions taught by Yeh wherein irradiation is used for crosslinking. Motivation is provided by the teaching of Weikard et al that photoinitiators easily incorporated into aqueous coating compositions are preferred for use in the polyurethane emulsions. With respect to claims 3 and 11-13, Yeh does not mention adding a UV stabilizer, a UV absorber, a wax or a nylon. However, Weikard et al teach adding light stabilizers and wax dispersing agent. It would have been obvious to one skilled in the art at the time of the invention to employ light stabilizers and a wax dispersing agent, as taught by Weikard et al in analogous aqueous polyurethane emulsions, in the compositions disclosed by Yeh. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing light stabilization to the cured coating and improving dispersion in the aqueous dispersions, as taught by Weikard et al.

Claims 1-12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeh and Weikard et al, as applied to claims 1-12 and 18-21 above, and further in view of Griswold et al (5,525,427). The disclosures of Yeh and Weikard et al are discussed above. Yeh teaches polysiloxane emulsions but does not specifically mention methylmethoxypolysiloxane. Griswold et al teach a water reducible weatherstrip coating composition comprising a silicone emulsion, a bath life extender, such as a polyurethane dispersion, and a crosslinking composition. See column 5, lines 29-47, and column 7, lines 43-60. Methylmethoxypolysiloxane is taught as a water reducible resin acting as a bath life extender and water repellant.

It would have been obvious to one skilled in the art to employ a polysiloxane having a methoxy group, as taught by Griswold et al, as the silicone emulsion in the compositions

disclosed by Yeh and Weikard et al in order to take advantage of its function as a bath life extender and a water repellant, taught by Griswold et al.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeh and Weikard et al, as applied to claims 1-12 and 18-21 above, and further in view of Van Den Berg et al (6,987,135). The disclosures of Yeh and Weikard et al are discussed above. Van Den Berg et al disclose photoactivatable water borne coating compositions comprising a polyurethane dispersion and a photoinitiator. Table 8 discloses a compositions comprising KIP 100F as photoinitiator, a BYK defoamer, BYK leveler and a polyamide wax orgasol each in amounts encompassed by the instant claims. Yeh and Weikard et al do not teach polyamide additives in the disclosed compositions. However, It would have been obvious to one skilled in the art at the time of the invention to employ a polyamide wax orgasol, as taught by Van Den Berg et al in analogous aqueous polyurethane dispersions, in the aqueous polyurethane dispersions taught by Yeh in combination with Weikard et al. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation that the polyamide additives would function advantageously in the dispersions disclosed by Yeh.

Claims 1-12 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeh (6,347,408) in view of Weikard et al (6,960,639), as applied to claims 1-12 and 18-21 above, and further in view of WO '728. The disclosures of Yeh and Weikard et al are discussed above. WO '728 teaches that analogous photocurable compositions comprising a polyurethane dispersion and silicone wetting agent are useful for coating weatherstrip seals and other

automotive seals while avoiding high solvent emissions (page 4, line 23, to page 5, line 4). It would have been obvious to one skilled in the art at the time of the invention to employ the coating compositions taught by Yeh in combination with Weikard et al for automotive seals and coatings requiring flexibility. Yeh teaches composition for coating flexible gloves which are rubber materials analogous to the rubber materials used for seals in automotive applications.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hyber et al (5,837,076) disclose a protective coating for tire sidewalls comprising a polysiloxane agent.

Wefringhaus et al (6,682,779) disclose aqueous polyurethane dispersion comprising a means for improving sliding behavior, such as emulsions of organofunctional polydimethyl siloxanes (column 4, lines 8-29).

Burton et al (6,443,202) disclose protective coatings for tire sidewalls. The coating compositions comprise polyvinylalcohol, ethylene-vinylacetate copolymer, a silicon emulsion and/or a thickening agent.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB  
11/9/2007

/Susan W Berman/  
Primary Examiner  
Art Unit 1796